

NON-PUBLIC?: N  
ACCESSION #: 9402230274  
LICENSEE EVENT REPORT (LER)

FACILITY NAME: LaSalle County Station Unit 2 PAGE: 1 OF 3

DOCKET NUMBER: 05000374

TITLE: Unit 2 Reactor Scram When in Shell Warming on the Main  
Turbine Due To Personnel Error  
EVENT DATE: 01/18/94 LER #: 94-001-00 REPORT DATE: 02/15/94

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 2 POWER LEVEL: 007

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR  
SECTION:  
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:  
NAME: Dennis M. Pristave, Operating Engineer TELEPHONE: (815) 357-6761  
ext. 2217

COMPONENT FAILURE DESCRIPTION:  
CAUSE: A SYSTEM: COMPONENT: MANUFACTURER:  
REPORTABLE NPRDS: N

SUPPLEMENTAL REPORT EXPECTED: No

#### ABSTRACT:

On January 18, 1994, Unit 2 was in Operational Condition 2 (startup).  
Work on Main Steam Isolation Valve (MSIV) Limit switches was in progress.  
At 0133 hours during the Main Turbine Shell Warming Process, first stage  
pressure increased sufficiently to clear the thirty (30) percent bypass  
of the Turbine Stop Valve Closed Scram. A Reactor Scram occurred as the  
Turbine Stop Valves were already in a closed position.

All components functioned as designed. The required notifications were  
made, and equipment was returned to normal operating status.

An investigation was performed and the root cause was determined to be  
Operator Personnel Error. The Operator allowed himself to become  
distracted while being interviewed by an off-site evaluator and did not  
closely monitor the shell warming process.

This is reportable per 10CFR50.73(a)(2)(iv) due to an automatic actuation of an Engineered Safety Feature (ESF) and unplanned automatic Reactor Protection System (RPS) Reactor Scram.

END OF ABSTRACT

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## PLANT AND SYSTEM IDENTIFICATION

General ELeCtric - Boiling Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as (XX).

### A. CONDITION PRIOR TO EVENT

Unit(s): 2 Event Date:01/18/94 Event Time: 0133 Hours

Reactor Mode(s): 2 Modes(s) Name: Startup

Power Level(s): 7%

### B. DESCRIPTION OF EVENT

On January 18, 1994, Unit 2 was in Operational Condition 2 (Startup). Work on the Main Steam Isolation Valve (MSIV, MS) SB! Limit switches was in progress. Unit 2 was starting up following a maintenance outage. The Unit was holding in the startup mode at about seven percent Reactor power while Main Steam Line Isolation Valve (MSIV) work was in progress. The Unit Nuclear Station Operator (NSO) was attempting to keep the Main Turbine Shell warm in anticipation of putting the Turbine Generator on Line following work on the MSIV Limit Switches.

The NSO was performing LOP-TG-01 "Turbine Trip Resetting, Shell Warming, and Chest Warming" which provided direction on maintaining the Main Turbine Shell warm. The NSO adjusted the shell warming controller from 48% to 54% demand to supply more steam to the Main Turbine Shell. This was soon followed by alarm B109 turbine trip "first hit" which reads "TURB GEN INTERCEPT VALVES FAST CLSR" on 2PM02J (turbine control panel). The alarm occurs at 50 psig. After receiving this alarm, the NSO reduced steam demand to 52% in an attempt to correct the condition. The first stage pressure continued to increase to

approximately 120 psig. over approximately 30 minutes.

During this period of time, the NSO was involved in a discussion with a person from an off-site evaluation group. The NSO allowed himself to become distracted from the task of maintaining steam pressure on the Main Turbine for warming purposes. The NSO was continuing his conversation with the individual when a half scram was received. The NSO then quickly scanned his panels to determine the source of the half scram. After approximately 19 seconds, a full scram occurred. When the Reactor Protection System (RPS) activated due to the Main Turbine Steam Pressure increasing and the greater than 30 percent reactor power with Turbine Stop Valve (TSV) closed scram setpoint being reached.

### C. APPARENT CAUSE OF EVENT

The cause of the Reactor Scram was the turbine first stage pressure continuing to rise until it was high enough to clear the greater than 30% power bypass of a reactor scram with turbine stop valves closed.

The root cause was personnel error. The Reactor scram occurred due to the NSO making an assumption that he had turned or at least stopped the increasing first stage pressure by decreasing the shell warming controller from approximately 55 percent to 52 percent. However, he did not confirm the pressure was stabilized by having the alarm (Turbine Generator Intercept Valve Fast Closure) clear or by observing the first stage pressure indication decrease. The NSO knew that the continued increase in first stage pressure would result in the scram but failed to monitor the parameter for approximately 30 minutes. The NSO also believed that by maintaining shell pressure between 60 and 90 PSIG as required by the LOP-TG-01 that the first stage pressure would not exceed the 140 pound interlock.

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### C. APPARENT CAUSE OF EVENT CONTINUED

The SCRE questioned the NSO when the initial alarm activated but failed to ensure the NSO corrected the increasing pressure trend. Additionally, both the NSO and SCRE allowed themselves to become distracted from the evolution by a visitor in the Control Room.

#### D. SAFETY ANALYSIS OF EVENT

The plant responded as designed for an automatic reactor scram. This event was of minimal safety consequence because of the low power at the time of the event. This specific event, i.e., shell warming, only occurs at low power.

#### E. CORRECTIVE ACTIONS

1. The immediate corrective action was to enter LGP 3-2, "Reactor Scram" and carry out the procedure to completion.
2. The NSO and Shift Engineer discussed this event with the Station Manager. Expectations regarding attention to detail and eliminating distractions in the Control Room were emphasized.
3. The Annunciator Alarm Procedure LOA 1 (2)PM02JB-109 was changed to indicate that when the alarm is received, chest and/or shell warming is to be immediately secured. This alarm is set at 50 psig, well below the normal setting of less than or equal to 140 psig for the scram bypass removal switches.
4. A Process Computer Alarm at 90 psig was inserted to back up the annunciator Alarm at 50 psig.
5. The adequacy of Control Room Access and Control is under review. It will be upgraded as appropriate by March 18, 1994. AIR 374-180-94-0010802 will track this item.
6. Procedure LOP-TG-01 "Turbine Trip Resetting, Shell Warming, and Chest Warming" will be revised by February 28, 1994 to clarify the additional factors to consider while warming the shell between the 60 to 90 PSIG range. This item is being tracked by AIR 374-180-94-0010803.
7. As a means to gain from the lessons learned, this event will be included in the Licensed Operator Training Program. This is being tracked by AIR 374-180-94-0010804.

#### F. PREVIOUS EVENTS

LER Number Tittle  
373/92-015 Loss Of Unit 1 Bus 141Y Due To Personnel Error

G. COMPONENT FAILURE DATA

None

ATTACHMENT TO 9402230274 PAGE 1 OF 2

Sheet 7 "EVENT SUMMARY AND CAUSE CODES" omitted.

ATTACHMENT TO 9402230274 PAGE 2 OF 2

Commonwealth Edison  
LaSalle County Nuclear Station  
2601 N. 21st. Rd.  
Marseilles, Illinois 61341  
Telephone 815/357-6761

February 15, 1994

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

Licensee Event Report #94-001-00, Docket #050-374 is being submitted to your office in accordance with 10CFR50.73 (a)(2)(iv).

D. J. Ray  
Station Manager  
LaSalle County Station

DJR/DMP/grv

Enclosure

xc: Nuclear Licensing Administrator  
NRC Resident Inspector  
NRC Region III Administrator  
INPO - Records center  
IDNS Resident Inspector

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